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☐	L3	mucosal$.clm. and parenteral$.clm.	385
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07241247 EMBASE No: 1998140729

Mucosal, systemic, or combined therapeutic immunizations in cynomolgus monkeys naturally infected with Gastrospirillum hominis-like organisms

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Vaccine Research (VACCINE RES.) (United States) 1997, 6/3 (141-150)

CODEN: VAREE ISSN: 1056-7909

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 17

US-PAT-NO: 6576244
DOCUMENT-IDENTIFIER: US 6576244 B1

TITLE: LT and CT in parenteral immunization methods against helicobacter infection

DATE-ISSUED: June 10, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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Guy; Bruno	Lyons			FR

US-CL-CURRENT: 424/234.1; 424/184.1, 424/236.1, 424/94.6, 514/12, 530/350, 530/403

CLAIMS:

What is claimed is:

1. A method of inducing an immune response to Helicobacter in a mammal, said method comprising administering to said mammal by injection (a) an immunogenic Helicobacter pylori polypeptide that is admixed with (b) an adjuvant comprising immunogenic Helicobacter pylori polypeptide that is admixed with (b) an adjuvant comprising one or more of (i) heat-labile toxin of Escherichia coli, (ii) the B subunit of the heat-labile toxin of Escherichia coli, (iii) cholera toxin, and (iv) the B subunit of cholera toxin.

2. The method of claim 1, wherein the polypeptide and the adjuvant are provided together in a solution.

3. The method of claim 1, wherein the polypeptide comprises Helicobacter pylori urease or a subunit or immunogenic fragment thereof.

4. The method of claim 1, wherein the heat-labile toxin of Escherichia coli and the B subunit of the heat-labile toxin of Escherichia coli are administered to said mammal.

5. The method of claim 1, wherein said injection is subcutaneous.

6. The method of claim 1, wherein said injection is intradermal.

7. The method of claim 1, wherein said Helicobacter pyloripolypeptide comprises catalase or an immunogenic fragment thereof.

8. The method of claim 1, wherein said Helicobacter pylori polypeptide comprises a polypeptide selected from the group consisting of HspA, HspB, lactoferrin receptor, p76 (SEQ ID NOs:1-22), p32 (SEQ ID NOs:23 and 24), BabA, BabB, AlpA, AlpB, and immunogenic fragments thereof.

9. The method of claim 1, further comprising administering to said mammal one or more additional immunogenic Helicobacter pylori polypeptides.

10. The method of claim 9, wherein said Helicobacter pylori polypeptide is urease and said one or more additional Helicobacter pylori polypeptides is

selected from the group consisting of catalase, HspA, HspB, lactoferrin receptor, p76 (SEQ ID NOs:1-22), p32 (SEQ ID NOs:23 and 24), BabA, BabB, AlpA, AlpB, and immunogenic fragments thereof.

11. The method of claim 1, wherein said Helicobacter pylori polypeptide comprises a subunit of Helicobacter pylori urease.

12. The method of claim 1, wherein said Helicobacter pylori polypeptide comprises Helicobacter pylori catalase.

13. The method of claim 1, wherein said Helicobacter pylori polypeptide comprises a Helicobacter pylori polypeptide selected from the group consisting of catalase, HspA, HspB, lactoferrin receptor, p76 (SEQ ID NOs:1-22), p32 (SEQ ID NOs:23 and 24), BabA, BabB, AlpA, and AlpB.

14. A method of inducing a protective or therapeutic immune response to Helicobacter infection in a mammal, said method comprising administering to said mammal by injection (a) a polypeptide comprising a subunit of Helicobacter pylori urease that is admixed with (b) an adjuvant comprising one or more of (i) heat-labile toxin of Escherichia coli, (ii) the B subunit of the heat-labile toxin of Escherichia coli, (iii) cholera toxin, and (iv) the B subunit of cholera toxin.

Xu-Amano et al. (J. Exp. Med. 178:1309-1320, 1993) showed that mice develop specific serum IgM and IgG (but not IgA) responses following intraperitoneal immunization with tetanus toxin (TT) plus CT. TT alone gave low responses. Hornquist, et al. (Eur. J. Immunol. 23:2136-2143, 1993) showed that CT promotes priming of CD4+ T cells when delivered intravenously with Keyhole Limpet Hemocyanin (KLH). Marinaro et al. (J. Immunol. 155:4621-4629, 1995) showed that CT stimulates production of serum IgE to TT when the antigen and adjuvant are delivered subcutaneously.

DOCUMENT-IDENTIFIER: US 6893657 B2
** See image for Certificate of Correction **
TITLE: Solid dose delivery vehicle and methods of making same

Abstract Text (1):
The present invention encompasses a solid dose delivery vehicle for ballistic administration of a bioactive material to subcutaneous and intradermal tissue, the delivery vehicle being sized and shaped for penetrating the epidermis. The delivery vehicle further comprises a stabilizing polyol glass loaded with the bioactive material and capable of releasing the bioactive material in situ. The present invention further includes methods of making and using the solid dose delivery vehicle of the invention.

CLAIMS:

1. A therapeutic dried composition in solid dose form suitable for oral delivery, comprising a stabilizing polyol and immunogenic agent wherein the composition provides a quick release or flooding dose of the immunogenic agent after administration.

3. The composition, according to claim 1, wherein the immunogenic agent is selected from the group consisting of live and attenuated viruses, nucleotide vectors encoding antigens, bacteria and antigens.

4. The composition, according to claim 1, wherein the immunogenic agent is an antigen selected from the group consisting of diptheria, tetanus, pertussis, botulinum, cholera, Dengue, hepatitis A, C and B, haemophilus influenzae b, herpes virus, Hylobacterium pylori, influenza, Japanese encephalitis, meningococci A, B and C, measles, mumps, papilloma virus, pneumococci, polio, rubella, rotavirus, respiratory syncytial virus, Shigella, tuberculosis, yellow fever and combinations thereof.

DOCUMENT-IDENTIFIER: US 6248330 B1
** See image for Certificate of Correction **
TITLE: Immunogenic compositions against helicobacter infection, polypeptides for use in the compositions, and nucleic acid sequences encoding said polypeptides

CLAIMS:

1. An immunogenic composition, which induces antibodies against Helicobacter infection, comprising a purified, synthetic, or recombinant Helicobacter HspA polypeptide or a fragment thereof, wherein said fragment has at least 6 amino acids and is immunogenic.

3. The immunogenic composition according to claim 1, wherein the HspA is encoded by the HspA gene of plasmid pILL689 (CNCM I-1356) or a fragment thereof, wherein said fragment has at least 6 amino acids and is immunogenic.

4. The immunogenic composition according to claim 1, further comprising a Helicobacter HspB polypeptide or a fragment thereof, wherein said fragment has at least 6 amino acids and is immunogenic.

5. The immunogenic composition according to claim 4, wherein the HspB is encoded by the HspB gene of plasmid pILL689 (CNCM I-1356) or a fragment thereof, wherein said fragment has at least 6 amino acids and is immunogenic.

6. Proteinaceous material comprising purified, synthetic, or recombinant HspA of Helicobacter pylori or a fragment thereof, wherein said fragment has at least 6 amino acids and is immunogenic.

7. The proteinaceous material according to claim 6, wherein the material comprises the Helicobacter HspA polypeptide having the amino acid sequence illustrated in FIG. 6 (SEQ ID NO: 29) or a fragment thereof, wherein said fragment has at least 6 amino acids and is immunogenic.

9. The proteinaceous material according to claim 6 further comprising a Helicobacter HspB polypeptide or a fragment thereof, wherein said fragment has at least 6 amino acids and is immunogenic.

10. Proteinaceous material comprising a fusion protein, wherein the fusion protein comprises at least one Helicobacter HspA or a fragment thereof as defined in any one of claims 6-9 and at least one polypeptide selected from the group consisting of

a Helicobacter pylori urease structural polypeptide or fragment thereof, wherein said fragment is recognized by antibodies to H. felis urease, and

a Helicobacter felis urease structural polypeptide or immunogenic fragment thereof.

11. An immunogenic composition, which induces antibodies against Helicobacter infection, comprising at least one sub-unit of a purified, synthetic, or recombinant Helicobacter felis urease structural polypeptide selected from the group of polypeptides consisting of SEQ ID NO: 20 and SEQ ID NO: 21, and a heat shock protein (Hsp) from Helicobacter or a fragment thereof, wherein the Hsp protein is HspA or HspA and HspB encoded by the HspA/HspB genes of plasmid pILL689 (CNCM I-1356), and wherein said fragment has at least 6 amino acids and is immunogenic.

12. The immunogenic composition according to claim 11, wherein the Hsp protein is Helicobacter HspA

or Hsp A and HspB having amino acid sequence(s) depicted in FIG. 6 (SEQ ID NOS: 29-30), or a fragment thereof, wherein said fragment has at least 6 amino acids and is immunogenic.

15. A method for treatment or prevention of Helicobacter infection in a mammal comprising the step of administering the immunogenic composition of claim 13 to said mammal.

16. An immunogenic composition, capable of inducing antibodies against Helicobacter infection, comprising at least one sub-unit of a purified, synthetic, or recombinant Helicobacter felis urease structural polypeptide selected from the group of polypeptides consisting of SEQ ID NO: 20 and SEQ ID NO: 21, further comprising at least one heat shock protein (Hsp) from Helicobacter, wherein the Hsp protein is HspA, HspB, or HspA and HspB encoded by the HspA/HspB genes of plasmid pILL689 (CNCM I-1356), or a fragment thereof, wherein said fragment has at least 6 amino acids and is capable of generating antibodies.

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DOCUMENT-IDENTIFIER: US 20020122794 A1
TITLE: ANTIGENIC PREPARATION FOR TREATMENT OR PREVENTION OF HELICOBACTER INFECTION

CLAIMS:

1. A vaccine composition for use in the treatment or prevention of Helicobacter infection in a mammalia host, which comprises an immunologically effective amount of an ntigenic preparation, which comprises the lipopolysaccharide (LPS) of Helicobacter bacteria, or an immunogenic fragment thereof, together with one or more pharmaceutically acceptable carriers and/or diluents.

2. A vaccine composition according to claim 1, which comprises the LPS of H. pylori or H. felis, or an immunogenic fragment thereof.

5. A vaccine composition according to claim 4, wherein the adjuvant is a mucosal adjuvant.

6. A method for the treatment or prevention of Helicobacter infection in a mammalian host, which comprises a ministration to said host of an immunologically effective amount of an antigenic preparation which comprises the lipopolysaccharide (LPS) of Helicobacter bacteria, or an immunogenic fragment thereof.

7. A method according to claim 6, wherein said antigenic preparation comprises the LPS of H. pylori or H. felis, or an immunogenic fragment thereof.

10. A method according to claim 9, wherein said adjuvant is a mucosal adjuvant.

14. Use of an immunologically effective amount of an antigenic preparation, which comprises the lipopolysacc ride (LPS) of Helicobacter bacteria, or an immunogenic fragment thereof, for the treatment or prevention of Helicobacter infection in a mammalian host.

15. Use according to claim 14, wherein said immunologically effective amount comprises the LPS of H. pylori or H. felis, or an immunogenic fragment thereof.

18. Use according to claim 17, wherein said adjuvant is a mucosal adjuvant.

20. Use according to any one of claims 14 to 18, wherein said antigenic preparation is parenterally administered to said host.

22. Use of an antigenic preparation comprise the lipopolysaccharide (LPS) of Helicobacter bacteria, or an immunogenic fragment thereof, optionally in association with an adjuvant,in the manufacture of a vaccine composition for the treatment or prevention of Helcobacter infection in a mammalian host.

25. A vaccine composition for use in the treatment or prevention of Helicobacter infection in a mammalian host, which comprises an antibody according to claim 23 or claim 24, together with one or more pharmaceutically acceptable carriers and/or diluents.

26. A method for the treatment or prevention of Helicobacter infection in a mammalian host, which comprises passive immunization of said host by administration of an effective amount of an antibody according to claim 23 or claim 24.

27. Use of an effective amount of an antibody according to claim 23 or claim 24, for the treatment or prevention of Helicobacter infection in a mammalian host.

28. Use of an antibody according to claim 23 or claim 24, in the manufacture of a vaccine composition for the treatment or prevention of Helicobacter infection in a mammalian host.

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By use of the term "immunologically effective amount" herein in the context of treatment of Helicobacter infection, it is meant that the administration of that amount to an individual infected host, either in a single dose or as part of a series, is effective for treatment of Helicobacter infection. By the use of the term "immunologically effective amount" herein in the context of prevention of Helicobacter infection, it is meant that the administration of that amount to an individual host, either in a single dose or as part of a series, is effective to delay, inhibit or prevent Helicobacter infection. The effective amount varies depending upon the health and physical condition of the individual to be treated, the taxonomic group of individual to be treated, the capacity of the individual's immune system to synthesise antibodies, the degree of protection desired, the formulation of the vaccine, the assessment of the medical situation, and other relevant factors. It is expected that the amount will fall in a relatively broad range that can be determined through routine trials.

21 Throughout this specification and the claims which follow, unless the context requires otherwise, the word "comprise", or variations such as "comprises" or "comprising", is to be understood to imply the inclusion of a stated integer or group of integers but not the exclusion of any other integer or group of integers.

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L4: Entry 7 of 10 File: USPT Dec 16, 2003

US-PAT-NO: 6663873
DOCUMENT-IDENTIFIER: US 6663873 B2

TITLE: Antigenic preparation for treatment or prevention of helicobacter infection

DATE-ISSUED: December 16, 2003

INVENTOR-INFORMATION:

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US-CL-CURRENT: 424/234.1; 424/130.1, 424/137.1, 424/141.1, 424/150.1, 424/184.1, 424/193.1, 424/278.1, 424/283.1, 424/434, 424/93.4, 514/12, 514/2, 514/54, 977/773

CLAIMS:

What is claimed is:

1. A composition for use in the treatment or prevention of Helicobacter pylori or Helicobacter felis infection in a mammalian host by eliciting a mucosal immune response in said host, which composition comprises (A) an immunologically effective amount of an antigenic preparation comprising an at least partially purified lipopolysaccharide (LPS) of Helicobacter bacteria or an immunogenic fragment thereof which elicits said mucosal immune response, (B) a compound with adjuvant activity and (C) one or more pharmaceutically acceptable carriers or diluents.

2. A composition according to claim 1, which comprises the LPS of H. pylori or H. felis, or an immunogenic fragment thereof.

3. A composition according to claim 1, wherein the adjuvant is a mucosal adjuvant.

4. A composition according to claim 1, wherein said antigenic preparation comprises the LPS of H. pylori or H. felis.

5. A composition according to claim 1, wherein said composition comprises a purified Helicobacter lipopolysaccharide preparation.

6. A method for the treatment or prevention of Helicobacter pylori or

Helicobacter felis infection in a mammalian host by eliciting a mucosal immune response in said host, comprising administering to said host an immunologically effective amount of an antigenic preparation comprising an at least partially purified lipopolysaccharide (LPS) of Helicobacter bacteria, or an immunogenic fragment thereof, to elicit said mucosal immune response.

7. A method according to claim 6, wherein said antigenic preparation comprises the LPS of H. pylori or H. felis, or an immunogenic fragment thereof.

8. A method according to claim 6, wherein said antigenic preparation is administered in association with an adjuvant.

9. A method according to claim 8, wherein said adjuvant is a mucosal adjuvant.

10. A method according to claim 6, wherein said antigenic preparation is orally administered to said host.

11. A method according to claim 6, wherein said antigenic preparation is parenterally administered to said host.

12. A method according to claim 6, wherein said host is a human.

13. A method according to claim 6, wherein said antigenic preparation comprises a purified Helicobacter lipopolysaccharide preparation.

14. A method according to claim 6, wherein said antigenic preparation comprises the LPS of H. pylori or H. felis.

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DOCUMENT-IDENTIFIER: US 20020161192 A1
TITLE: Helicobacter pylori live vaccine

CLAIMS:

1. a recombinant attenuated microbial pathogen, which comprises at a least one heterologous nucleic acid molecule encoding a Helicobacter antigen, wherein said pathogen is capable to express said nucleic acid molecule or capable to cause the expression of said nucleic acid molecule in a target cell.

4. The pathogen according to any of claims 1-3, wherein the Helicobacter antigen is urease, a urease subunit, an immunologically reactive fragment thereof, or a peptide mimotope thereof.

5. The pathogen according to any one of claims 1-3, wherein the Helicobacter antigen is a secretory polypeptide from Helicobacter, an immunologically reactive fragment thereof, or a peptide mimotope thereof.

6. The pathogen according to any one of claims 1-3 and 5, wherein the Helicobacter antigen is selected from the group consisting of the antigens AlpA, AlpB, immunologically reactive fragments thereof, or a peptide mimotope thereof.

7. The pathogen according to any one of claims 1-6, wherein said nucleic acid molecule encoding a Helicobacter antigen is capable to be expressed phase variably.

8. The pathogen according to claim 7, wherein said nucleic acid molecule encoding the Helicobacter antigen is under control of an expression signal which is substantially inactive in the pathogen and which is capable to be activated by a nucleic acid reorganization caused by a nucleic acid reorganization mechanism in the pathogen.

12. Composition according to claim 11, which is a living vaccine, which is suitable for administration to a mucosal surface or via the parenteral route.

14. A method for preparing a recombinant attenuated pathogen according to any one of claims 1-10, comprising the steps: a) inserting a nucleic acid molecule encoding a Helicobacter antigen into an attenuated pathogen, wherein a recombinant attenuated pathogen is obtained, which is capable of expressing said nucleic acid molecule or is capable to cause expression of said nucleic acid molecule in a target cell, and b) cultivating said recombinant attenuated pathogen under suitable conditions.

15. The method according to claim 14, wherein said nucleic acid molecule encoding a Helicobacter antigen is located on an extrachromosomal plasmid or inserted in the chromosome.

16. A method for identifying Helicobacter antigens, which raise a protective immune response in a mammalian host, comprising the steps of: a) providing an expression gene bank of Helicobacter in an attenuated pathogen and b) screening the clones of the gene bank for their ability to confer protective immunity against a Helicobacter infection in a mammalian host.

[0035] By use of the term "immunologically effective amount" herein, it is meant that the administration of that amount to a mammalian host, either in a single dose or as part of a series, is effective for treatment or prevention of Helicobacter infection. This amount varies depending upon the health and physical condition of the individual to be treated, the taxonomic group of individual to be treated, the capacity of the individual's immune system to synthesise antibodies, the degree of protection desired, the formulation of the vaccine, the assessment of the medical situation, and other relevant factors. It is expected that the amount will fall in a relatively broad range that can be determined through routine trials.

[0036] Preferably, but not essentially, the antigenic preparation of this invention is orally administered to the host, and is administered in association with a mucosal adjuvant. However, the invention also extends to parenteral administration of this antigenic preparation.

US-PAT-NO: 6984385
DOCUMENT-IDENTIFIER: US 6984385 B2

TITLE: Immunological combination compositions and methods

DATE-ISSUED: January 10, 2006

PRIOR-PUBLICATION:

DOC-ID	DATE
US 20020131983 A1	September 19, 2002

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Guy; Bruno	Lyons			FR

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APPL-NO: 10/096687 [PALM]
DATE FILED: March 12, 2002

RELATED-US-APPL-DATA:
continuation parent-doc US 08588621 00 19960119 US 6379675 A child-doc US 10096687
continuation-in-part parent-doc US 08476656 00 19950607 US 6251405 A child-doc US 08588621

INT-CL-ISSUED:

TYPE	IPC	DATE	IPC-OLD
IPCP	A61K39/00	20060101	A61K039/00

INT-CL-CURRENT:

TYPE	IPC	DATE
CIPP	A61 K 39/00	20060101

US-CL-ISSUED: 424/192.1; 424/234.1, 424/192.1, 424/193.1, 424/197.11, 424/200.1, 424/201.1, 424/203.1, 424/237.1, 424/244.1, 530/350, 435/69.1, 435/69.3, 435/69.7, 435/71.1
US-CL-CURRENT: 424/192.1; 424/193.1, 424/197.11, 424/200.1, 424/201.1, 424/203.1, 424/234.1, 424/237.1, 424/244.1, 435/69.1, 435/69.3, 435/69.7, 435/71.1, 530/350

FIELD-OF-CLASSIFICATION-SEARCH: 424/234.1, 424/192.1, 424/193.1, 424/197.11, 424/200.1,

424/201.1, 424/203.1, 424/237.1, 424/244.1, 530/350, 435/691, 435/69.3, 435/69.7, 435/71.1
See application file for complete search history.

PRIOR-ART-DISCLOSED:

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	CLASS
93/07897	April 1993	WO	

ART-UNIT: 1645

PRIMARY-EXAMINER: Graser; Jennifer E.

ABSTRACT:

Immunological compositions and methods for making and using them. The compositions contain at least one antigen and at least one lipoprotein and optionally an adjuvant. The lipoprotein can itself be antigenic or immunogenic. The antigen can be influenza HA and the lipoprotein a recombinantly expressed product having an OspA leader for lipidation and PspA for the protein portion. The antigen can be OspC and the lipoprotein OspA. The components of the composition are co-administered. A potentiated immunological response is obtained by the compositions and methods.

7 Claims, 5 Drawing figures

STIC-ILL

From: Portner, Ginny
Sent: Tuesday, February 24, 1998 10:25 AM
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Subject: from 1641

Title: PROTECTIVE IMMUNIZATION AGAINST HELICOBACTER - THE NEED FOR STIMULATION OF THE COMMON-MUCOSAL IMMUNE-SYSTEM
Author(s): CHEN M; LEE A; HAZELL S; HU P; LI Y
Corporate Source: UNIV NEW S WALES,SCH MICROBIOL & IMMUNOL/KENSINGTON/NSW 2033/AUSTRALIA/; SUN YAT SEN UNIV,PEOPLES MUNICIPAL HOSP 1/CANTON//PEOPLES R CHINA/
Journal: GASTROENTEROLOGY, 1993 , V104, N4 (APR), PA681
ISSN: 0016-5085
Language: ENGLISH Document Type: MEETING ABSTRACT
Geographic Location: AUSTRALIA; PEOPLES REPUBLIC OF CHINA
Subfile: SciSearch; CC LIFE--Current Contents, Life Sciences; CC CLIN--Current Contents, Clinical Medicine
Journal Subject Category: GASTROENTEROLOGY AND HEPATOLOG